

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

*Ex parte* THOMAS E. HANSEN  
and ROBERT PHILLIPS

Appeal No. 2005-2131  
Application 10/000,254

MAILED

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U.S. PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

HEARD: October 19, 2005

Before GARRIS, WARREN and WALTZ, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1 through 4, 6 through 10 and 18 through 20. Claims 11 through 17 are also of record and have been withdrawn from consideration by the examiner under 37 CFR § 1.142(b).<sup>1</sup>

Claims 1, 6 and 18 illustrate appellants' invention of a method of and an apparatus for

<sup>1</sup> Appellants state that “[n]o Amendment was filed after Final Rejection under 37 CFR 1.116. A Request for Reconsideration was filed on June 30, 2004 and received by the United States Patent and Trademark Office on July 2, 2004. The Request was considered but no claims allowed” (brief, page 6). The examiner states that “[t]he amendment after final filed on June 30, 2004 has been entered” (answer, page 2). The official electronic records of the USPTO show that the amendment filed July 2, 2004, in fact did amend claims 1, 6 and 20, which amendments are reflected in the appendix to the brief. Claims 11 through 17 remain of record (see the amendment of July 2, 2004 (page 7)).

enabling a lined label applicator to accept linerless label sheet for application to the surface of elements, and are representative of the claims on appeal:<sup>2</sup>

1. A method for enabling a lined label applicator to accept linerless label sheet for application to the surface of elements comprising border cutting a sheet consisting essentially of a linerless label to form a source of pre-cut linerless label, associating the pre-cut source of linerless labels on a roll of temporary liner sheet consisting essentially of a sheet of less than 0.032mm in thickness, the pre-cut linerless label having a border for a label, the border having a linear distance defined by a micro-bridged cut along the border so that a composite of:

- a) said temporary liner sheet and
- b) micro-bridged linerless labels are provided

feeding the composite into said lined label applicator where lined label is normally directed into said lined label applicator.

6. The method of claim 1 wherein the temporary liner consists essentially of a polymer film of less than 0.025 mm in thickness.

18. An apparatus for enabling a lined label applicator to accept linerless label sheet for application to the surface of elements comprising a cutter to provide a source of border cut sheet linerless label, a source of the cut linerless labels on a roll of temporary liner sheet added to the cut linerless label, the sheet consisting essentially of a sheet of less than 0.032mm in thickness, a feeder for feeding the cut linerless label on a roll of a temporary liner sheet to the lined label applicator, the linerless label having a border for a label, the border having a linear distance defined by a micro-bridged cut along the border so that a composite of a) and b), wherein a) and b) are defined below as:

- a) said temporary liner sheet and
- b) micro-bridged linerless labels

is provided to a feeder for feeding the composite into said lined label applicator, and a stripping system to remove label from matrix by severing microbridges, and an applicator system for applying stripped label to a substrate.

20. The apparatus of claim 19 wherein the linerless label is provided as printed label prior to being supplied to the cutter.

The references relied on by the examiner are:

Evans	3,565,750	Feb. 23, 1971
Koehlinger et al. (Koehlinger)	3,920,122	Nov. 18, 1975
Boreali	5,573,621	Nov. 12, 1996
Nedblake	6,592,693	Jul. 15, 2003

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<sup>2</sup> We have reproduced these claims as they are presented in the amendment filed July 2, 2004.

Majkrzak et al. (Majkrzak)	WO 00/07883	Feb. 17, 2000
(published World Intellectual Property Organization Application)		
Schumann et al. (Schumann) <sup>3</sup>	WO 00/30963	Jun. 2, 2000
(published World Intellectual Property Organization Application)		

“Controlling costs challenge label stock, liner suppliers,” *Paper, Film & Foil Converter* (January 1, 1995) (*PFFC*).

The examiner has rejected appealed claims 1 through 4, 7 through 10 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Majkrzak in view of Schumann, Koehlinger and Boreali, further in view of Evans and *PFFC* (answer, pages 4-7), and appealed claims 6, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Majkrzak in view of Schumann, Koehlinger and Boreali, further in view of Evans and *PFFC*, and further in view of Nedblake (answer, page 8).

Appellants state that “[c]laims 1-4, 7-10 and 18 shall stand or fall with the patentability of claim 1” and “[c]laims 6, 19 and 20 shall stand or fall with the patentability of claim 6,” and argues claim 20 with respect to the latter group, based on the grounds of rejection (brief, pages 10 and 18-19). Thus, we decide this appeal based on appealed claims 1, 6 and 20. 37 CFR § 1.192(c)(7) (2003); *see also* 37 CFR § 41.37(c)(1)(vii) (September 2004).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the answer and to the brief for a complete exposition thereof.

#### *Opinion*

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner that, *prima facie*, the claimed method of and apparatus for enabling a lined label applicator to accept linerless label sheet for application to the surface of elements would have been obvious over the combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans and *PFFC* with respect to claim 1 and the

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<sup>3</sup> The examiner has relied on United States Patent 6,571,983, issued June 3, 2003, to Schumann et al. (Schumann ‘983) as a translation of Schumann because the same are “equivalent” (answer, page 5; *see also* office action mailed October 1, 2003 (page 7) and the Office action mailed March 30, 2004 (page 5)), which finding is not disputed by appellants. We refer to Schumann ‘983 in our opinion.

combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans, *PFFC* and Nedblake with respect to claims 6 and 20 to one of ordinary skill in this art at the time the claimed invention was made. Accordingly, since a *prima facie* case of obviousness has been established by the examiner, we again evaluate all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellants' arguments in the brief and the testimonial evidence in the Pace declaration<sup>4</sup> to the extent that it is relied on in the brief. *See generally, In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

The examiner finds, and we agree, that Majkrzak would have disclosed to one of ordinary skill in this art a method of applying linerless labels to a substrate through a lined label applicator by feeding a composite of a linerless label, precut, that is, die-cut, from a sheet consisting essentially of a linerless label, associated with a roll of temporary liner sheet into the lined label applicator where the lined label is normally directed into said lined label applicator, thus differing from the claimed method encompassed by appealed independent claim 1 in not teaching that (1) the label is micro-bridge cut along a border thereof with the sheet, and (2) the temporary liner sheet consisting essentially of a sheet of less than 0.032 mm, that is, less than 1.259 mil, and from the claimed method encompassed by appealed claim 6, dependent on claim 1, in not teaching that the temporary liner consists essentially of a polymer film of less than 0.025 mm, that is, less than 0.984 mil (answer, e.g., pages 5-6, 8 and 9-10).

The examiner finds with respect to the first issue involving appealed claim 1, that Schumann would have taught that a "bridge" along the border of a label in a flat form web matrix, should be punched or cut such that at least one "bridge," depending on the material, connects the label to the flat form web with sufficient support to enable the controlled transport or association of the label to a temporary web (answer, page 5; see Schumann '983, e.g., col. 1, ll. 4-9 and 37-47, col. 2, ll. 21-27, 30-35 and 47-60, col. 2, l. 61, to col. 3, l. 43, and col. 4, ll. 2-25). The examiner further finds that, in similar manner, Koehlinger would have disclosed

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<sup>4</sup> The Declaration of Mr. Raymond Pace, executed June 30, 2004, was submitted with the amendment filed July 2, 2004, and entered and considered by the examiner in the advisory action mailed July 19, 2004.

that the number and size of the “bridges” employed is dependent on the label web material (answer, page 5; *see* Koehlinger, e.g., col. 1, ll. 4-10, col. 2, ll. 3-7, col. 5, ll. 52-55, and col. 6, ll. 8-32), and that Boreali would have disclosed that linerless labels are pre-cut with “ties,” that is, “bridges,” from the matrix to provide support for processing (answer, page 5; *see* Boreali, e.g., col. 1, ll. 8-58, col. 2, ll. 10-18, and col. 3, ll. 62-66).

On this factual basis, the examiner determines that one of ordinary skill in the art would have been led by Schumann, Koehlinger and Boreali to use micro-bridged cut linerless labels in the method of Majkrzak in the reasonable expectation of avoiding problems of associating labels from a web to temporary liners (answer, pages 6-7).

The examiner finds with respect to the second issue involving appealed claim 1, that Evans would have taught that “polyolefin film-based low-release liner for temporarily supporting and covering pressure sensitive adhesive carried by a sheet or other article can have thickness of 1-4 mils,” that is, 0.0254 mm to 0.1016 mm, and “can be laminated to label stock” (answer, pages 6 and 12; *see* Evans, e.g., col. 1, ll. 18-22 and 29-35, col. 2, l. 71, to col. 3, l. 6, and col. 5, ll. 64-71). The examiner further finds that *PFFC* reports that “one of the biggest trends in labels and liners is the use of thinner substrates” with the thickness of “1 and 1½ mil,” that is, 0.0254 mm to 0.0381 mm, for cost reduction and environmental needs (answer, page 6; *see* *PFFC*, pages 1-2).

On this factual basis, the examiner determines that one of ordinary skill in the art would have been led by Evans and *PFFC* to use thin support liners of a polymer film having a thickness as low as 1 mil, that is, 0.0254 mm, as the liner sheet in the method of Majkrzak in the reasonable expectation of providing temporary support and covering pressure sensitive adhesives carried by a liner sheet for labels to reduce costs and satisfy environmental needs (answer, page 7).

The examiner finds with respect to the issue involving appealed claim 6, that in addition to Evans and *PFFC*, Nedblake would have taught that a label bearing liner can be “low cost, lightweight . . . as opposed to heavier webs,” that is, the liner webs can be “on the order of 0.75 mil (0.019 mm) . . . as compared to conventional liner webs of thickness of 2-3 mils,” that is, 0.0508 mm to 0.07620 mm (answer, page 8; *see* Nedblake, e.g., col. 1. ll. 7-24, col. 2,

ll. 3-18 and 53-60, col. 3, ll. 46-52, col. 3, l. 66, to col. 4, l. 11, and col. 4, ll. 21-38). On this factual basis, the examiner determines that one of ordinary skill in the art would have been led by Evans, *PFFC* and Nedblake to use thin support liners of a polymer film having a thickness as low as 0.75 mil, that is, 0.019 mm, as the liner sheet in the method of Majkrzak in the reasonable expectation of providing a low cost, lightweight liner instead of heavier stock for material cost savings (answer, page 8).

Appellants point out that “the linerless label is cut and separated from the matrix” in the method of Majkrzak, and there is no suggestion in the combined teachings of the references applied to appealed claim 1 that a micro-bridged cut border “would enable the high speed application of linerless label stock with an ultrathin liner in a commercial process” (brief, pages 12-13). Appellants submit that in an “automated apparatus, it is essential that surfaces and combinations of layers provide uniform thicknesses and the absence of wrinkles . . . [which] capability has never been before provided on linerless label stock with ultrathin liners,” arguing that “the liner is so thin, it is highly flexible, subject to wrinkling, and does not provide physical support to the label” as well as being “substantially weaker than industry standard liners and tend to break on standard label applicators when used with traditional cutting means” (*id.*, pages 13-14). In this respect, appellants contend that Schumann and Koehlinger “used individual ‘thin’ layers by combining multiple layers (e.g., the stiffening layers and then adhesively securing the stiffened polymer layers) to provide a label material that could be used,” and thus, there is “[n]o recognition of the use of thin liner material” in the references (*id.*, page 14). Appellants argue that the liners of “the references in this rejection” are not encompassed by appealed claim 1 because of the language “a roll of temporary liner sheet consisting essentially of a sheet of less than 0.032mm in thickness” which “excludes the artificial use of ‘thin’ layers by adding other layers thereto” (*id.*; original emphasis deleted).

Appellants submit argument stated to be based on a particular quoted passage in Schumann with respect to “Figure 7 on pages 5 and 6 of the reference” (brief, page 14). The quoted passage appears to be a translation of all but the last sentence of the first full paragraph on page 7 of Schumann. We cannot find in the record a translation which corresponds to that quoted by appellants. In this respect, we will consider appellants’ arguments as if they were

based on the corresponding disclosure in Schumann '983, at col. 4, ll. 14-25, and the description of Schumann **Fig. 7** as described at Schumann '983, col. 5, ll. 32-45. We note again here that the examiner has relied on Schumann '193 as a translation in the Office actions and the answer, which position is not disputed by appellants (*see above note 3*).

Appellants contend that "problems arise in the use of liners and particularly thin liners as [claimed] . . . in the cutting of labels," pointing out that Majkrzak "cuts the label from the supporting matrix and removes the label from the matrix before applying it to a liner" and Schumann "cuts the label while it is on the temporary carrier" (brief, page 14). Appellants further contend with respect to the cited portion of Schumann and Schumann **Fig. 7**, that "[t]he problem attempted to be addressed by this disclosure is the inability to precisely control the thickness of the cut so that it would pass completely through the label layer (and not leave partial cuts between the bridges), yet not cut the liner layer" such that "any cutting contact would damage a significant portion of the thickness of . . . [a thin] liner, and almost any significant contact with the cutter would shift or wrinkle the thin liner . . . [which] would tear the release liner, causing adhesive to ooze through the back of the adjacent substrate in a wound up roll" (*id.*, pages 14-15).

Appellants submit that *PFFC*<sup>5</sup> "is the classic reference cited for a technical wish or objective, without any disclosure that enables attainment of that objective, recognizing the difficulties and problems in obtaining that objective" (*id.*, pages 15-16). Appellants argue that this reference is non-enabling, pointing out that "one of the 'objectives'" of the claimed invention is "a thinner liner," contending that "[i]t was found that any attempt to use a thinner liner suffered from the immediate effects of wrinkling and partial separation of the liner from the label" and "[t]here is no suggestion in the art that the use of microbridging with thin liners in a system with precutting of the liner and subsequent application to linerless label . . . would overcome these problems" (*id.*, pages 16-17; original emphasis deleted). Appellants additionally contend that "the precutting of the label allows its application to an ultrathin label that is of lower

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<sup>5</sup> Appellants argue the "AWA article" they identify as a "new" reference cited in the final Office action (brief, page 15). It is clear from appellants' argument and the record that *PFFC* is that "article."

cost than normal label liner" (*id.*, pages 17-18).

Appellants further contend that the teachings of thinner liners in Nedblake "is not done with linerless label (and no reason is provided for using linerless label) and is not done with microbridge cutting," pointing out that the reference is "limited to laser cutting as an enabling cutting step, and does not teach microbridging" (*id.*, pages 19).

Finally, appellants contend that the Pace declaration "provides evidence that one with executive knowledge in the art is unaware of any products that provide thin (less than 0.5 mil) liners with any label products and particularly not with linerless label products," and that "declarant recognizes the technical difficulties in providing such thin liners on labels and indicates his belief that only through the combination of steps" in the claimed process are "quality thin (less than or equal to 0.05 mils) liners . . . applied to labels" (brief, page 19).

The examiner responds that, with respect to appellants' argument that Majkrzak "does not teach border cutting before association with a liner," the reference would have taught one of ordinary skill in this art to "partially sever individual labels on a continuous sheet (i.e., linerless stock" and then "apply the continuous sheet with its partially severed labels to a temporary, reusable support (i.e., liner)," citing page 11, ll. 1-7, and page 11, l. 30, to page 12, l. 4, but "does not . . . mention using microbridges" (answer, page 10). The examiner argues that Schumann would have taught that a partially severed, "bridged" border cut holds the label within the sheet until it is dispensed, thus avoiding dispensing problems during label application, and that this reference along with Koehlinger teach that partially severed labels in a continuous web (answer, pages 10-11).

The examiner further argues that "Evans and [PFFC] would have suggested the use of "a liner of thickness within the range of less than 0.032 mm (1.26 mil), as claimed" (answer, page 12). In this respect, the examiner argues that one of ordinary skill in the art would have used a polymer film "liner as thin as 1 mil (0.025 mm)" taught by the combination of Evans and PFFC as a release liner with the motivation to reduce costs as taught by PFFC, which thickness falls within appealed claim 1 (answer, pages 12-13). The examiner further argues that Nedblake clearly would have suggested the use of a "liner as thin as 0.75 mil (0.019 mm)" for material savings compared to thicker conventional liners, and uses a laser to cut the label while it is

separated from the liner, the thickness of the thinnest liner disclosed by the reference falling within appealed claim 6 (answer, pages 13-14). The examiner finds that the Pace declaration is insufficient because “liners as thin or thinner than 0.5 mils (0.0127 mm)” is more than twice as thin as the range of “less than 0.032 mm (1.2 mils) specified in appealed claim 1 (answer, pages 14-15).

We find substantial evidence on this record supporting the examiner’s position. As an initial matter, we interpret the term “micro-bridged cut” and the terms in the limitations “temporary liner sheet consisting essentially of a sheet of less than 0.032mm in thickness” and “temporary liner consists essentially of a polymer film of less than 0.025 mm in thickness,” appearing in appealed claims 1 and 6, respectively, involved with the issues before us. We give this claim language the broadest reasonable interpretation in their ordinary usage as they would be understood by one of ordinary skill in the art in light of the written description in the specification, unless another meaning is intended by appellants as established in the written description of the specification, and without reading into the claims any limitation or particular embodiment disclosed in the specification. *See, e.g., In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004); *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

We find that the term “micro-bridged cut” as it is used in context in appealed claim 1 and in the specification, means that the border of the label is partially severed from the sheet or web, that is, one or more uncut sections or “bridges” still attach(es) the border of the label to the sheet or web (e.g., page 11, l. 1, to page 12, l. 6). Indeed, we fail to find in the specification a specific definition of this term with respect to the amount of “the periphery of the intended outline or border of the label . . . left uncut” or the “absolute dimensions of the bridges,” and will not read into the appealed claims any illustrative embodiment or preferred ranges (e.g., page 11, ll. 18-28).

With respect to the subject claim limitations, appellants contend that this language “excludes the artificial use of ‘thin’ layers by adding other layers thereto” (*see above p. 6*). We cannot agree. The term “consisting essentially of” is used in claim construction to indicate that

“the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention.” *PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). Thus, the interpretation of this term requires a determination of whether additional layers in liners taught in the applied prior art would materially affect the basic and novel characteristics of the claimed method of appealed claim 1, because this phrase customarily excludes such materials. See *In re Herz*, 537 F.2d 549, 551, 190 USPQ 461, 463 (CCPA 1976) (explaining *Ex parte Davis*, 80 USPQ 448 (Pat. Off. Bd. App. 1948)). In arriving at this determination, the written description in appellants’ specification must be considered. *Herz; supra* (“[I]t is necessary and proper to determine whether [the] specification reasonably supports a construction” that would exclude or include particular ingredients.); see also *PPG Indus.*, 156 F.3d at 1354-57, 48 USPQ2d at 1353-56 (Patentees “could have defined the scope of the phrase ‘consisting essentially of’ for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention. The question for our decision is whether PPG did so.”).

Our review of the written description in the specification reveals that the liner can be “less than or equal to 1.25 miles (less than 0.032 mm)” and “may be any polymeric or even thin paper layer,” wherein “[r]elease layers, controlled release layers, and the like such as silicone resins, acrylate resins, epoxy resins, and mixed resin functionalities can be used as extremely thin coatings on the liner to control these properties as can corona discharge, sputtering, oxidation, laser discharge, or chemical reaction of the surface” (page 9, ll. 17-18, and page 9, l. 29, to page 10, l. 8). Thus, contrary to appellants’ arguments, the liners having the thickness specified in claims 1 and 6 can have additional “coatings” thereon which would provide functionality and additional thickness, the construct not excluded from the claims by use of the transitional term “consisting essentially of.” See *PPG Indus., supra*; *Herz, supra*.

We find, as did the examiner and contrary to appellants’ arguments, that Majkrzak would have disclosed that “[a]mong the more useful methods of constructing . . . prerolled linerless labels” are several which include the step of “partially severing individual labels on the continuous sheet,” the composite of partially severed linerless labels on a “temporary, reusable

support material” can “then be fed into a conventional label applicator” (page 11, ll. 1-2, 4, 9-10, and 16-17, and page 11, l. 30, to page 12, l. 4). Schumann would have disclosed that the formation of bridges from flat form, web-like label stock, which can have two layers, can be accomplished by “cutting” the stock with, for example, lifting punches, rotary cutting rollers and laser beams, wherein the cutting edge of cutting devices, other than laser beams, has “one or more interruptions, for example, notches” which can be controlled to obtain the desired pattern for controlling dispensing of the label (Schumann ‘983, e.g., col. 1, 32-56, col. 2, ll. 21-60, col. 2, l. 61, to col. 3, l. 38, col. 3, l. 57, to col. 4, l. 25, and col. 5, ll. 31-45, describing FIG. 7). Thus, the reference establishes a method wherein only the label layer is cut and then only partially severed. We fail to find in the passage of Schumann relied on by appellants the “problem” of the “inability to precisely control the thickness of the cut” as they argue (*see above p. 7*). This is because Schumann would have taught in this entire passage how the problem, which occurs “in rare cases,” can be overcome by the design of the “cutting edge” (Schumann ‘983, e.g., col. 4, ll. 23-25). Thus, Schumann contains no teaching which would have led one of ordinary skill in the art away from using the “punch” cutting means as implied by appellants’ argument. Indeed, even if this was so, Schumann still would have taught the use of laser beams for the same purpose.

Furthermore, we agree with appellants that Schumann would have disclosed “multiple layers” (*see above p. 6*) because the flat form label stock that can be used in the methods of this reference has at least two layers. However, we cannot agree with appellants that Koehlinger discloses “multiple layers” because appellants have not cited to the reference in support of their finding and we fail to find such a construct in the references. We find that Koehlinger would have taught at col. 4, l. 6 *et seq.*, that a web of label stock is printed on one surface before or after it is cut to form bridge(s), and thereafter an adhesive is applied to the other surface, thus disclosing a single layer label web sheet.

In any event, appellants do not argue the teachings of Boreali which we find would have disclosed the use of “ties” or bridges in cut linerless label stock, thus alone establishing that one of ordinary skill in this art would have micro-bridge cut linerless label stock.

Thus, we find that the examiner correctly determines that one of ordinary skill in this art would have used the methods of the combined teachings of Schumann, Koehlinger and Boreali to partially sever the individual labels in the continuous linerless label sheet in the method of Majkrzak. *See In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”); *In re Siebentritt*, 372 F.2d 566, 567-68, 152 USPQ 618, 619 (CCPA 1967) (express suggestion to interchange methods which achieve the same or similar results is not necessary to establish obviousness).

With respect to the matter of the thickness of the temporary liner sheet encompassed by appealed claim 1, the examiner relies on the combined teachings of Evans and *PFFC* in this respect. We are unconvinced by appellants’ arguments which focus only on *PFFC*, contending that this reference merely suggests a non-enabled desideratum in the label and liner arts, and that the use of a thin liner overcomes certain problems. *PFFC* would have disclosed that in addition to the trend in the art to achieve reduced costs noted by several sources as reported in this reference, according to one source, polypropylene liners were being used which can be silicone-coated, wherein the polypropylene can be as thin as 1.5 mil, that is, 0.0381 mm (page 2). In this respect, we find that Evans would have disclosed pressure sensitive adhesive sheet material which is “a smooth thin planar-rigid polyolefin film having an inseparably-bonded cured silicone-polymer coating” which can be as thin as 1 mil, as the examiner finds, wherein the polyolefin base layer can be a polypropylene and can be used as a liner for pressure sensitive transfer tape that can be laminated to label stock (col. 1., ll. 15-18 and 29-35, col. 2, l. 71, to col. 3, l. 15, and col. 5, ll. 68-71). The examiner finds that this combination of references would have suggested a liner for labels of a thickness of 1 mil falling within appealed claim 1. Indeed, in the absence of argument based on the combined teachings of *PFFC* and Evans, and appellants do not present any argument with respect to Evans, *cf. Keller*, 642 F.2d at 426, 208 USPQ at 882 (arguments must be addressed to the combination of references rather than the references individually), we find that one of ordinary skill in this art would have found an enabling

disclosure in Evans for the thin silicone-coated polypropylene liners described in *PFFC*, such liners having a thickness of 1 mil, that is, 0.0254 mm, and thus falling within appealed claim 1.

Appellants do not dispute that Nedblake teaches liners as thin as 0.75 mil, that is, 0.019 mm falling within appealed claim 6. We are not convinced by appellants' arguments that Nedblake is inapplicable because it would not have taught using the liners with linerless labels which have been micro-bridge cut during the laser cutting step disclosed therein. Indeed, we find that Nedblake would have disclosed a process using "preprinted continuous label-bearing webs using laser cutting techniques . . . employing low-cost, lightweight liners as opposed to the relatively thick and more costly liners conventionally used[,] . . . wherein a preprinted label bearing web is separated from its liner, laser cut . . . to generate individual cut labels, whereupon the individual labels are reapplied either to the original liner or a secondary liner web" (col. 1, ll. 7-24; see also col. 2, ll. 3-18 and 53-60). Nedblake further would have disclosed that the "low-cost, very thin liner web 24" can be either the original liner or the secondary liner, either liner having the thickness of 0.75 mil, that is, 0.019 mm, with which the process using a laser "allows run speeds of 500 ft/min. or more" (e.g., col. 3, ll. 46-52, and col. 3, l. 66, to col. 4, l. 38). Thus, as the examiner finds, Nedblake uses a laser to cut the label from the web while it is in fact linerless, which is then combined with a temporary thin liner that is either the original thin liner or a secondary thin liner to form a composite.

In view of the teachings of bridge cuts in the label layer in Schumann, which teaches punch cutters and lasers, and the teachings of bridge cuts in linerless labels in Koehlinger and Boreali, we find that the examiner has properly determined that one of ordinary skill in this art would have used the methods of the combined teachings of Schumann, Koehlinger and Boreali with the thin liners of the combined teachings of *PFFC* and Evans with respect to claim 1, and with the thin liners of the combined teachings of *PFFC*, Evans and Nedblake with respect to appealed claim 6, in the reasonable expectation of providing a composite of micro-bridged linerless labels and thin temporary liner sheet that can be used in the method of Majkrzak.

We are not persuaded otherwise by appellants' arguments based on the alleged problems associated with micro-bridge cutting linerless labels and combining the same with temporary liner sheet having the claimed thicknesses. We find no objective evidence in the record,

including the testimonial evidence in the Pace declaration, which supports appellants' arguments in these respects, and appellants do not cite to such evidence other than the Pace declaration. Indeed, the Pace declaration sets forth no objective evidence in support of declarant Pace's "best professional belief" based on "liners as thin as or thinner than 0.5 mils," that is, 0.0127 (¶¶ 6-8), which, as the examiner finds, is twice as thin as the upper end of the ranges in appealed claims 1 and 6, and indeed, does not reflect the teachings of the references in which the liners can be as thin as 0.75 mils, that is, 0.019 mm. *See In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984); *In re Payne*, 606 F.2d 303, 315, 203 USPQ 245, 256 (CCPA 1979); *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972) ("This court has said . . . that mere lawyers' arguments unsupported by factual evidence are insufficient to establish unexpected results. [Citations omitted.] Likewise, mere conclusory statements in the specification and affidavits are entitled to little weight when the Patent Office questions the efficacy of those statements. [Citations omitted]"); *see also In re Baxter Travenol Labs.*, 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) ("[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared to the closest prior art. [Citation omitted.]"); *In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 71 (CCPA 1979) (the claimed subject matter must be compared with the closest prior art in a manner which addresses the thrust of the rejection); *cf. In re Woodruff*, 919 F.2d 1575, 1577-78, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990) ("The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. [Citations omitted.] These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range. [Citations omitted.]").

Furthermore, appellants do not contest the teachings of Majkrzak with respect to the claimed apparatus encompassed by appealed independent claim 18, but argue appealed claim 20, dependent thereon, which requires that "the linerless label is provided as printed label prior to being supplied to the cutter," thus further limiting claim 18 which specifies "[a]n apparatus . . . comprising" at least, among other limitations, "a source of the cut linerless labels on a roll of temporary sheet." We determine that claims 18 and 20 encompass apparatus that includes the

materials on which the claimed apparatus is intended to work, and thus, the materials, such as the printed linerless labels of claim 20, do not constitute any structural limitation which patentably distinguishes the claims from the applied prior art. *See generally, In re Otto*, 312 F.2d 937, 939-40, 136 USPQ 458, 459-60 (CCPA 1963) *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935); *In re Rishoi*, 197 F.2d 342, 344-45, 9 USPQ 71, 72-73 (CCPA 1935); *cf. Ex parte Masham*, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987).

Accordingly, on this record, we determine that one of ordinary skill in the art routinely following the combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans and *PFFC* and the combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans, *PFFC* and Nedblake would have arrived at the claimed method of and apparatus for enabling a lined label applicator to accept linerless label sheet for application to the surface of elements encompassed by appealed claims 1, 6 and 20, respectively, including each and every limitation thereof arranged as required therein, without recourse to appellants' disclosure. *See In re Gorman*, 933 F.2d 982, 986-87, 18 USPQ2d 1885, 1888-89 (Fed. Cir. 1991) ("The extent to which such suggestion [to select elements of various teachings in order to form the claimed invention] must be explicit in, or may be fairly inferred from, the references, is decided on the facts of each case, in light of the prior art and its relationship to the applicant's invention."); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988) ("The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that [the claimed] process should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. [Citations omitted] Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure."); *Keller*, 642 F.2d at 425, 208 USPQ at 881; *Siebentritt*, 372 F.2d 566, 567-68, 152 USPQ 618, 619; *see also In re O'Farrell*, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988) ("Obviousness does not require absolute predictability of success. . . . There is always at least a possibility of unexpected results, that would then provide an objective basis for showing the invention, although apparently obvious, was in law nonobvious. [Citations omitted.] For obviousness under § 103, all that is required is a reasonable expectation of success. [Citations omitted.]").

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans and *PFFC* and the combined teachings of Majkrzak, Schumann, Koehlinger, Boreali, Evans, *PFFC* and Nedblake with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 4, 6 through 10 and 18 through 20 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (2005).

*AFFIRMED*

*Bradley R. Garris*  
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Administrative Patent Judge )  
*Charles F. Warren*  
CHARLES F. WARREN ) BOARD OF PATENT  
Administrative Patent Judge ) APPEALS AND  
 ) INTERFERENCES  
*Thomas A. Waltz*  
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